



NORFOLK ISLAND
REGIONAL COUNCIL

NORF'K AILEN RIJENL KAUNSL

PLAN OF MANAGEMENT

WAN PLAEN 'MAENEJMENT



BUMBORA RESERVE

BAMBOERA RESERW

2020 – 2030

Foreword

The Norfolk Island Council of Elders considers it important that any Plans of Management for Public Reserves take into account all of the following points in line with Norfolk Island's Cultural Heritage, both tangible and intangible:

1. The importance of the Public Reserves to Norfolk Islanders for recreational activities (fishing, swimming, walking, picnics etc.).
2. The importance of Public Reserves for cultural activities like picking hihis etc.
3. The importance of the natural environment on Norfolk Island to Norfolk islanders.
4. The importance of endemic/native plants to Norfolk Islanders for traditional craft and other cultural activities, and the importance of these activities continuing.
5. The importance of native birds, including seabirds, to Norfolk Islanders.
6. The impact of noxious weeds and pest animals like rats, cats, swamp hens and feral chickens, and the importance of controlling these.
7. The use of licensed cattle on roads, commons and other designated grazing areas to assist in the control of grass.

The Pitcairn settlers arrived on Norfolk Island in 1856 as a distinct ethnic group, bringing with them a unique heritage, culture and language. They were the first people to settle Norfolk Island as a permanent homeland.

Norfolk Islanders have a very strong cultural connection with the unique environment on the Island, and they are aware of the impact pest animals and noxious weeds can have on the natural and cultural values of the Island.

Norfolk Islanders have maintained many traditional customs, including weaving of hats, baskets and other items from native flax, Moo-oo and Bulrush ('drain flax'). These plants are not as abundant as they once were due to modified land use, and it is important that the Plans of Management for Public Reserves contain management actions to protect or increase the abundance of these plants to ensure these traditional customs can continue.

Other cultural activities that are still very important to Norfolk Islanders today include picking hihis and collecting crabs and other traditional food from the sea. In the past, Norfolk Islanders have relied upon the fruits from a range of exotic plants (including yellow and red guava, lemon and taro), and it is pleasing to see that the picking of exotic fruits can continue in Norfolk Island Public Reserves.

The Public Reserves on Norfolk Island are important to Norfolk Islanders for recreational activities such as fishing, swimming, walking and picnics. It is important that the Norfolk Island people continue to have access to the Public Reserves on Norfolk Island and that these activities can continue.

The Norfolk Island people recognise the need to protect and conserve Norfolk Island's natural and cultural resources. The natural environment and cultural charm of Norfolk Island are increasingly valuable commodities that must be managed appropriately in the face of increasing tourism and development pressure.

Norfolk Island Council of Elders

Forwad

De Norf'k Ailen Kaunsl 'Eldas thort es importantan fe eni Plaen 'Maenejment fe dem Pablik Reserw tek intu akaunt orlii point in lain lorngfe Norf'k Ailens Kalcharl Heritej, dem yu el sii endem yu kaant:

1. De importens 'dem Pablik Reserw fe Norf'k Ailen salan yuuset (fishen, naawien, worken, haewen 'piknik endem kaina'thing)
2. De importens 'dem Pablik Reserw fe orlem kalcharl thing yuusa duu simmes piken ' hihi endem
3. De importens 'luken orn Norf'ks naetrl said fe Norf'k salan
4. De importens 'orl auwas plaants tu Norf'k salan fe auwas tradishenl werk ena taeda kalcharl thing fe duu, en hau important tu orl aklan fe kiip ii thing gwen
5. De importens 'orl auwas nietew berd, enem siiberd, tu Norf'k salan
6. Wieh 'nokshas wiids ena pest simmes 'raet, keht, taalaberd enem wail faul el efekt ieh ailen, en hau important fe kontroel dem
7. Yuusen em laisens kaetl orna roed, ornaa koeman enem taeda said fe dem griez fe haelp in kontroelen 'graas.

Dem Pitkern salan kam tu Norf'k in 1856 es wan distinct ethnic groep, fetchen lorngfe dem, dems yuuniik heretij, kalcha ena laengwij. Dem es de fas salan fe yuus Norf'k aes dems hoem fe aewa.

Norf'k salan gata riel storng kalcharl konekshan tu de yuuniik envairanment 'dems alien en dem noe wathen pest aeneml ena nokshas wiids gwen haew orn de naechrl en kalchrl vaelyu 'dieh alien.

Norf'k salan bin kiipap plenti dems tradishenl kastam, simmes wiiwen 'haet, basket ena taeda thing fromem nietew flaks, mu-uu ena bulrush (drienflaks). Nor gat mach 'dii plaants es bin yuus kos 'chienj in wieh yuusen a laen, en es importantan fe dem Plaen 'Maenejment 'dem Pablik Reserw fe haew ina wieh fe kiipap ala groe de namba 'dii plaants fe miek shua orlii tradishenl kastam el kiip gwen.

Taeda kalchrl thing Norf'k salan duu stil es importantan fe Norf'k salan des dieh simmes piken 'hihi, ketchen 'krarb ena taeda tradishenl wetls auta saf. Lorng taim 'goe Norf'k salan bin el depen orna frukt fram wan rienj 'eksotik plaants (simmes 'yaela ena red gorwa, leman ena taala), enes gudan fe si stil el pik 'eksotik frukt auta dem Pablik Reserw.

Es importantan fe haew 'Pablik Reserw orn Norf'k soe Norf'k salan el kiip duwen dem thing simmes fishen, naawien, worken en haewen 'piknik. Es importantan fe Norf'k salan el kiip yuusen ii Pablik Reserw soe orlii praektes el kiip gwen.

Norf'k salan noe haew 'lukaut for, protect en kiip Norf'ks naechrl ena kalchrl resors. De naechrl ena kalchrl chaam 'Norf'k kamen mor n mor vaelubl en haew 'luk aafta et proepli aes tuares ena dewelapment groe biga.

Norf'k Ailen Kaunsl 'Eldas

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1 Introduction

1.1 Reserve Description

Bumbora Reserve has an area of 5.5 hectares, and is located on the south coast of Norfolk Island approximately 1km west of Kingston (Figure 1). Figure 2 shows the location of Bumbora Reserve.

The Reserve provides access to Bumbora each at Creswell Bay, which is a popular surfing beach. Locals also use Bumbora Reserve to access the more remote sandy beach to the southwest known as ‘Second Sands’. Rocky Point Creek forms the western boundary of the Reserve. The official Norfolk Island survey plan shows that Bumbora Reserve extends approximately to high water mark along the seaward boundary.



Figure 1: Bumbora Reserve Boundaries

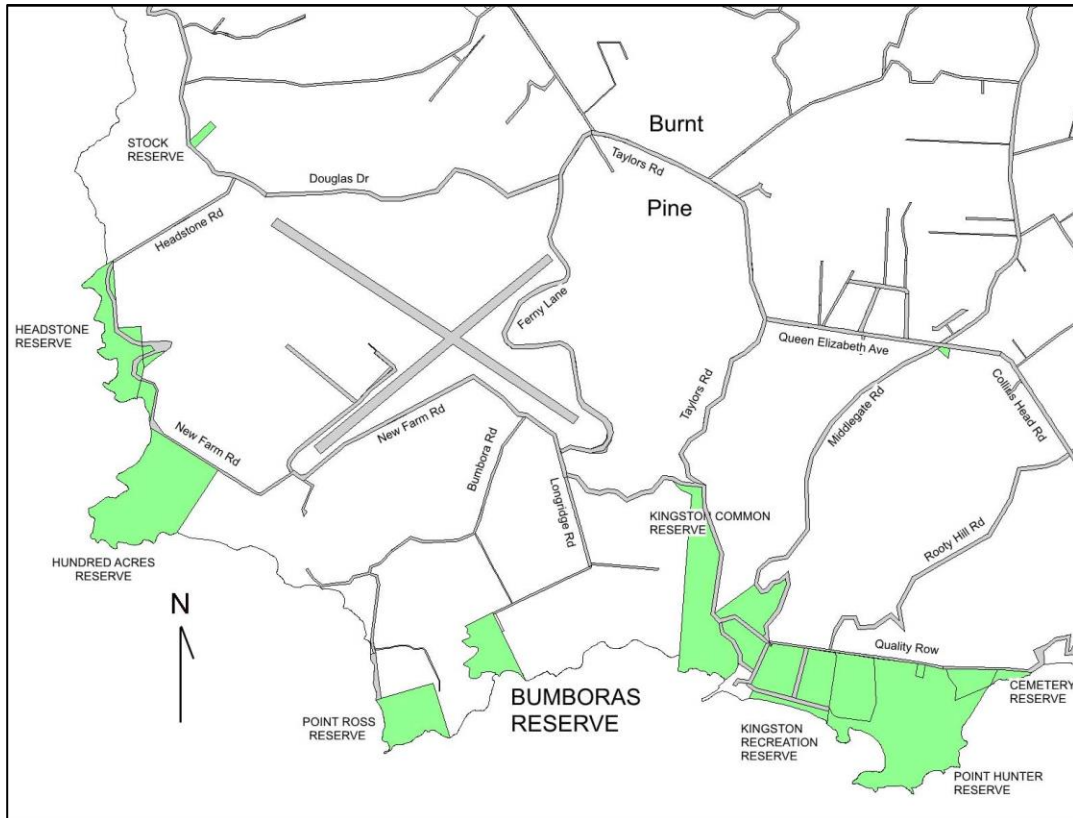


Figure 2. Bumbora Reserve location

1.2 Public Consultation and Planning Framework

The majority of the area now known as Bumbora Reserve was declared a Reserve under the *Commons and Public Reserves Law 1913*¹. However, it was probably originally proclaimed a Reserve during the late 1890's as is shown as a Reserve on the 1904² map of Norfolk Island. The informal parking area and access track to Bumbora beach is located on former Portion 96b1 which was originally privately owned.

In October 1965 the former Norfolk Island Advisory Council approached Mr Lex Ure, the owner of Portion 96b (which ran south-westerly from Rocky Point Creek to Point Ross and included the present Point Ross Reserve), to see if he would sell that property to the Council to enable easy public access from Bumbora Reserve to the sea. Mr Ure offered to donate the northernmost part of that portion to the people of Norfolk Island and the title to Portion 96b1 was transferred to the former Administration of Norfolk Island in 1966. Initially the area was simply freehold land owned by the Administration.

As per the recommendations of the Bumbora Reserve Plan of Management 2003, the land was formally gazetted as a Reserve on 30 June 2014. Unlike the other Public Reserves, Bumbora Reserve was not gazetted with a designated purpose.

Bumbora Reserve is located in the Conservation Zone. The *Norfolk Island Plan 2002* states: *'The intent of the Conservation Zone is to:*

¹ Annotation in: *The Laws of Norfolk Island in Force on 1st January 1965* (AGPS, Canberra), p 898: By section 3 and Schedule II to the Commons and Public Reserves Law, 1913, the following land was declared to be a public reserve: 'The Bumbora Reserve for public recreation at Creswell Bay, containing about thirteen and a half acres. The Crown lands within the boundaries of measured portion 90A - as shown upon plan N.7-695, sheet 2, at the Department of Lands, Sydney.'

² *Map of Norfolk Island Shewing Grants and Subdivisions*. Signed by Murphy, Government Surveyor, 8 February 1904.

(a) provide a very limited range of low intensity and low impact use or development opportunities in the areas under this zone that are considered to have very high natural and/or heritage conservation values;

(b) ensure that the areas within the Conservation Zone that have very high natural conservation values continue to provide the aesthetic backdrop for Norfolk Island and continue to provide the open space and wilderness habitat that is vital to life systems on the Island;

(c) include land between the Top of Cliff as shown on the Official Survey of Norfolk Island and the Mean High Water Mark. The areas under this zone are considered to have high natural conservation values; and

(d) ensure that the areas within the coastal portion of the Conservation Zone, to which the Coastal Environment Provisions apply in accordance with clause 9A, will be quarantined from built forms of use or development to ensure safety and to maintain cliff and foreshore stability.

The *Public Reserves Act 1997* states that each of the Norfolk Island Public Reserves will have a Plan of Management. The plans must promote the objects of the Act which are *'to protect and conserve public reserves so as to —*

(a) promote the conservation of the natural environment and landscape beauty of Norfolk Island;

(b) promote the conservation of the heritage of Norfolk Island; and

(c) preserve the way of life and the quality of life of the people of Norfolk Island.'

The first Plans of Management for the Public Reserves were prepared in 2003. In 2017, these original Plans of Management were placed on public display, with an invitation to provide feedback to produce updated plans of management. The following feedback was received specifically in relation to Bumbora Reserve:

- Could the native Coastal Bindweed (*Calystegia soldanella*) be planted in this Reserve, as it is on the verge of, or perhaps already extinct on Norfolk Island?
- Could more Norfolk Island Euphorbia (*Euphorbia norfolkiana*) be planted in Bumbora Reserve, as the once healthy population there has apparently plummeted, as has the Ball Bay population.

The following comments were also received from multiple respondents with regard to the reserves in general:

- No expansion of cattle grazing in the reserves. Protect current and proposed rehabilitated areas from cattle grazing. Native replanting is needed.
- Better management of waterways, including work to desilt the drainage channels in Kingston area to prevent coral deaths.

The Draft Plan of Management for Bumbora Reserve was prepared in 2019 and released for comment and feedback from the community over a 56-day period, which closed 20th December 2019. Feedback received during the 56 day Public Exhibition Period has been taken into account as part of the preparation of the Bumbora Reserve Plan of Management for 2020-2030.

This is the first full revision of the Plan of Management for Bumbora Reserve.

As part of the 2017 consultation process, the Public Reserves Advisory Committee also undertook a survey on Cats on Norfolk Island. The information gathered from this survey is outlined in the Pest Animals section of this Management Plan.

The Federal *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)* applies to Norfolk Island and is relevant in a number of ways to the management of the public reserves. In particular however, the Act recognises a number of native and endemic plant and animals as threatened species. These species are afforded protection under the Act, and are the subject of the Norfolk Island Region Threatened Species Recovery Plan (Director of National Parks, 2010). Bumbora Reserve is home to many threatened species recognised under the Act, and the management of the reserves needs to align with the Threatened Species Recovery Plan.

1.3 Heritage Listing

Bumbora Reserve was listed on the Register of the National Estate (RNE) on 21 October 1980. The RNE was replaced on 1 January 2004 by a National Heritage List, which recognises and protects places of outstanding heritage to the nation, and the Commonwealth Heritage List, which includes Commonwealth owned or leased places of significant heritage value. In 2016, the Commonwealth of Australia transferred ownership of Bumbora Reserve to the Administration of Norfolk Island, which is now the Norfolk Island Regional Council. Therefore, the Reserve no longer appears on the Commonwealth Heritage List.

Bumbora Reserve (including Portion 96b1, which is now part of the Reserve) was included on the Norfolk Island Heritage List in 2002, as per the *Heritage Act (NI) 2002*.

2 Significance of Bumbora Reserve

Bumbora Reserve is one of a small number of locations outside of the Kingston area where the public can easily access a sandy beach. The area is popular for surfing, fishing, picking hihis³, collecting natural materials for traditional weaving and plaiting, and for access to 'Second Sands' beach. Access to the Reserve is via a steep, unsealed road which currently limits the use of the Reserve to vehicles suitable for such conditions.

The Reserve is one of three known populations of the Critically Endangered *Euphorbia norfolkiana* (Norfolk Island Euphorbia). The southern section of the Reserve, on the slopes above Bumbora Beach has good quality Norfolk Island Pine (*Araucaria heterophylla*) forest with an understorey of White Oak (*Lagunaria patersonia*) and Native Flax (*Phormium tenax*), and there is low herbaceous coastal vegetation fringing the beach itself.

2.1 Geology and Landform

The rocks and landform at Bumbora Reserve are the product of successive volcanic eruptions and subsequent weathering, erosion and re-deposition. The basalt lava flows underlying the Reserve have been deeply weathered to form Rooty Hill Clays, which are the main soil type found on Norfolk. Stream erosion has formed the steep, rounded hillsides through which Rocky Point Creek meanders to the sea. Rocky Point Creek catchment extends north-west to New Farm Road and is large enough for the creek to flow year-round, even in times of drought. The slopes behind the beach are exposed to strong south-easterly and southerly winds, but upstream the hillsides are partially sheltered by the ridges.

2.2 Flora

In his report *2017 Survey of Public Reserves on Norfolk Island for Threatened Plant Species... Bumbora Reserve*, Dr Kevin Mills states:

'This reserve is largely forested, with planted pines, woody weed trees and modified coastal pine forest. Plantings of various native species have been carried out in the picnic area and along the track to the beach.

The Creek supports several riparian natives, including Flax *Typha orientalis*, Norfolk Island Carex *Carex neesiana*, River Club-rush *Schoenoplectus tabernaemontani* and several fern species. The forest canopy higher up the creek is largely composed of Olive *Olea europaea*, Holly *Schinus terebinthifolius* and Red Guava *Psidium cattleianum*, with some old Pine and Oak native trees. There is a stand of planted Red Cedar *Toona ciliata* below the Pine plantation. Saplings of native trees are relatively common in some places, particularly Beech *Myrsine ralstoniae*. The steep northeast slope is covered in pine plantation.

The upper beach and the lower creek side support coastal herbaceous species, such as Salt Couch *Sporobolus virginicus*, Mile-a-Minute *Wollastonia uniflora* and Creeping Brookweed *Samolus repens*. Behind the beach in the east of the slope supports good quality Pine forest with an understorey of Oak and Flax.'

³ Hihī means periwinkle in the Norfolk language.

Mills, 2017 refers to plantings that have been carried out over many years by Norfolk Island Central School students, the Norfolk Island Boardriders Association, the former Norfolk Island Reserves and Forestry Section, and more recently by 'Wild Mob'. In addition, many other native species have established themselves since cattle were excluded from the Reserve in the early 1990's

Mills, 2017 states that the main threat to biodiversity in Bumbora Reserve is woody weeds. The main area of weed invasion is in the northwest of the Reserve. Here, the vegetation is dominated in places by Olive (*Olea Europa*), Porpieh (*Psidium cattleianum*) and Hawaiian Holly (*Schinus terebinthifolius*). Removing these weeds is a long term project which should commence along the creek where there is already competition between native species and woody weeds.

Over past decades, almost all of the large trees on the steeper hillsides west of the access road were removed for timber, leaving these slopes dominated by woody weeds. In 1992, this area (approximately two hectares) was cleared and planted with Norfolk Island pines for habitat conservation purposes. This is the pine plantation referred to by Mills, 2017.

2.2.1 Significant Flora Species

In a targeted search of the Reserve for threatened species, Mills, 2017 recorded the following significant species:

Name	Habit	Significant due to EPBC ⁴ listing	Number of Plants (counted)	Estimate (where not possible)
Norfolk Island Euphorbia (<i>Euphorbia norfolkiana</i>)	Shrub	Critically Endangered	25 (planted)	-
Ti (<i>Cordyline obtecta</i>)	Tree	Vulnerable	5	-
Ground fern (<i>Hypolepis dicksonioides</i>)	Fern	Vulnerable	-	6 clumps
Broad-leaved Meryta (<i>Meryta latifolia</i>)	Tree	Critically Endangered	2 (planted)	
Popwood (<i>Myoporum obscurum</i>)	Tree	Critically Endangered	1 (planted)	
Beech (<i>Myrsine ralstoniae</i>)	Tree	Vulnerable	13 (planted)	Other natural specimens
Kings brakfern (<i>Pteris kingiana</i>)	Fern	Endangered	6	
Yellow daisy (<i>Senecio australis</i>)	herb	Vulnerable	31	

Name	Habit	Otherwise considered significant on Norfolk Island	Number of Plants (counted)	Estimate (where not possible)
Cutty grass (<i>Carex neesiana</i>)	Sedge	Yes	-	Hundreds present

In 1999, a search of much of the steep slope opposite Portion 96b1 and the ridge between the road and Creswell Bay located only four small specimens of the rare endemic Norfolk Island Euphorbia (*Euphorbia norfolkiana*). The number of this relatively short-lived species was down to only a few plants remaining in 2012. A subsequent search in 2017 failed to find any surviving plants of this species within the Reserve. However, revegetation by Parks Australia and Wild Mob in 2017 has resulted in a number of nursery grown plants being replanted into suitable habitat in the Reserve. This species is particularly vulnerable to grazing and has an extremely restricted and disjunct distribution on the Island, with only a very small number of populations known.

⁴ Environmental Protection and Biodiversity Conservation Act 1999 (Cth)

A few Melky Trees (*Excoecaria agallocha*) occur along the lower reaches of Rocky Point Creek. Anderson, 1997 states that this native species is uncommon on Norfolk and occurs in a number of reserves and on private property on the southern side of the creek.⁵

2.3 Fauna

During the summer months, small numbers of White Terns nest in the pines and White Oaks, particularly in the southern parts of the Reserve. Other seabirds, such as the Black (White-capped) Noddy, the Ghostbird (Wedge-tailed Shearwater) and the Red-tailed Tropicbird, may not necessarily breed in the Reserve but can be observed there during the breeding season.

There are about 33 species of terrestrial birds resident on Norfolk Island. Of these, about 20 regularly occur, or are likely to occur in Bumbora Reserve. 11 species of terrestrial birds were recorded at Bumbora Reserve during the December 1978 bird census by members of the Royal Australasian Ornithologists Union (now known as Birdlife Australia) and local naturalists (Schodde *et.al.* 1983). Of these, only two were endemic sub-species, two were self-introduced and now considered native and seven were introduced.

The Golden Whistler, Long-billed White-eye, Scarlet Robin, Grey Fantail, Norfolk Island Green Parrot and Norfolk Island Boobook Owl were not recorded in the Reserve in the 1978 census. The Grey Fantail may be expected to occur in the Reserve from time to time. The Golden Whistler, Scarlet Robin, Long-billed White-eye, Norfolk Island Green Parrot and Norfolk Island Boobook Owl would probably not be expected to be seen in Bumbora Reserve with any regularity. However, at the time of the preparation of this management plan, the range of the Norfolk Island Green Parrot and the Norfolk Island Boobook Owl had extended well beyond the area of the Norfolk Island National Park, so it is possible these species might begin to be seen or heard in the Reserve. During the 1990's, the endemic White-chested White-eye (Norfolk Island Silvereye) was reportedly occasionally observed in Bumbora Reserve and adjacent land. Christian, 2005 states that this species is only now sighted in the National Park, and the White-chested White-eye was listed as an extinct species under the *Environment Protection and Biodiversity Conservation Act* on 16 July 2000.

The most important things that can be done to increase the number and type of birds present in Bumbora Reserve are to restore the appropriate native vegetation habitat that was once present; and reduce predation by cats and rats.

2.4 Cultural Heritage and Scenic Amenity

A small number of stone artefacts, including an axe or adze head have been found at Bumbora indicating Polynesian use of the present Reserve area. Although archaeological excavations at Kingston indicate that Norfolk Island was occupied, perhaps continuously, by Polynesian people for some hundreds of years from around the 12th Century, no other evidence of Polynesian occupation of the Bumbora Reserve area has been found.

Much of Norfolk Island was cleared and farmed by Europeans early in the First Colonial Settlement, which began with Lieutenant Philip Gidley King's landing at Kingston in 1788. A plan showing grants and leases of land on Norfolk between 1791 and 1804⁶ does not show any land being taken up or settled at Bumbora during that period.

⁶ *Settlers Lots on Norfolk Island 1791 - 1804.*

Figure 3 shows the 1840 'Arrowsmith' map⁷ illustrating the lower reaches of Rocky Point Creek, the area around Creswell bay and along the cliff tops for about 220m inland from the coast was vegetated. Prisoner's gardens are shown as rectangular lots along Rocky Point Creek from 150m upstream from the sea (close to the present northern boundary of the Reserve) to where Rocky Point Road crosses the creek. Those gardens were part of Point Ross Farm, which abutted the 'Pig Run' (part of Longridge Agricultural Station) to the north. No foot tracks are shown between the gardens and Creswell Bay, however it might be assumed that people frequently accessed the seashore for fishing and other activities along the creek banks given the close proximity to the beach and the limited number of other locations with such easy access.



Figure 3: 1840 Arrowsmith Map Showing Bumbora Reserve Area

An 1887 map of the area shows access from Rocky Point Road to Portion 90 via a narrow right-of-way/road in the present location of Bumbora Road. In 1894, vacant Crown land portion 90, which included the Reserve, was divided into three. Portion 90b was granted to John James Heyward Quintal on 10 December 1894⁸ and portion 90c was granted to Arthur Buffett on 15 August 1895. It would appear that at that time a narrow easement was created along the northern boundary of Portions 90b and 90c to provide access to Portion 90a. This may have been when this portion was proclaimed a public Reserve as it is shown on the 1904 map as Bumbora Reserve. Portion 96b, which ran south-westerly from Rocky Point Creek to Point Ross and included the present Point Ross Reserve, remained vacant crown land.

During the next hundred years the larger pines and oaks in the north-western sector of the Reserve progressively disappeared, probably through a combination of senescence and felling for timber. Apart from this 'informal' agro-forestry exploitation of the Reserve, Pitcairn Island families used Bumbora for picnics, for washing clothes in the creek and to access the foreshore for fishing and gathering 'hahis'.

⁷ *Plan of Norfolk Island Shewing the General Nature of the Ground*. Often referred to as the 'Arrowsmith' map, 1840. However John Arrowsmith was the lithographer who copied the map prepared or drawn by Major Barney, Royal Engineers Corp. The map accompanied a letter dated 20 February 1840 from Major Barney to the Colonial Secretary and was printed by James and Luke J. Hansard on an order of the House of Commons dated 15 June 1841.

⁸ For a 'Quit rent of one peppercorn forever if demanded.'

In 1970, the Norfolk Island Flora and Fauna Society raised concerns that unique flora in the Reserve was being threatened by grazing. Portion 96b1 and a small part of the Reserve were fenced in December 1970 and in 1972 'the waterfront' was enclosed to prevent stock wandering into the Reserve from adjacent properties. Cattle continued to graze the rest of the Reserve until the late 1980's⁹ when they were excluded from the Reserve.

⁹Forester's 1988/89 annual report noting 'excellent natural regeneration' after fencing to exclude cattle from Bumbora and Two Chimneys reserves and that it was 'vital to exclude cattle to allow young trees to survive' (Council file 21/1/1).

3 Management Issues

3.1 Geology, Landform and Water

The seaward slopes of Bumbora Reserve are exposed to southerly and south-easterly storms. Following heavy rainfall, sediment from eroding surfaces such as the access road and the exposed seaward slopes of the Reserve is deposited onto vegetation along the creek. Sediment from the creek and the exposed slopes increases inshore turbidity and is likely to adversely affect the marine ecosystem, especially corals.

3.2 Weeds

The unsealed access road into Bumbora Reserve is broadly aligned on a north-south axis. On the eastern side of the road (the ocean side) there a heavy infestation of Olive (*Olea europaea*) and Hawaiian Holly (*Schinus terebinthifolius*). The vegetation in this area includes reasonably mature Pines (*Araucaria heterophylla*) and Oaks (*Lagunaria patersonia*), with a healthy shrub and understorey layer including Flax (*Phormium tenax*), Jersey cudweed (*Pseudognaphalium luteoalbum*), and Native spinaches (*Tetragonia spp*). The Olive (*Olea europaea*) and Hawaiian Holly (*Schinus terebinthifolius*) in this area should be removed using low impact techniques to ensure the protection of native species in the area.

The vegetation to the west of the access road contains a lot of weeds. In particular, the northwestern portion of the Reserve is dominated by woody weeds including African Olive (*Olea europaea*), Hawaiian Holly (*Schinus terebinthifolius*) and Porpieh (*Psidium cattleianum*). There is however, a significant area of Norfolk Island Pine plantation, with weeds limited to vines such as Morning Glory (*Ipomoea spp.*) and Japanese honeysuckle (*Lonicera japonica*).



Figure 4. Heavy woody weed infestation in the west of Bumbora Reserve, adjacent to Rocky Point Creek (photo looking east toward the access road from the creek)

3.3 Pest Animals

Feral cats are present and breed in the Reserve. Cats mainly feed on vertebrate prey meaning that nesting birds and chicks are particularly vulnerable. In 2017, a public survey on Norfolk was used to ask the 182 respondents who voluntarily responded which of the following three options they supported with regard to cats on Norfolk Island: (1) Do nothing; (2) Ban cats from Norfolk Island; or (3) Allow continued cat ownership under controlled conditions. 69% of respondents supported continued ownership under controlled conditions. The vast majority of respondents also made written comments and one of the most common comments was that private people were actively trapping cats, and that feral cats were a big problem on Norfolk. This shows the high level of community support for feral cat control.

Both the Polynesian Rat and the Black Rat occur in Bumbora Reserve. Rats feed on the seed and fruit of a variety of native and introduced plants and predate a variety of terrestrial fauna, including snails, land crabs, bird eggs and nestlings. A number of fauna species became extinct on Norfolk following the second world war. This includes a number of bird species and the native bat, and it is likely that these extinctions were at least in part due to rats.

The Argentine ant (*Linepithema humile*) is one of the world's worst invasive species, having spread from its native habitat in South America to establish populations on six continents and many oceanic islands. The Argentine Ant was first identified on Norfolk Island in 2005, and an eradication program commenced in 2008. This aggressive ant actively displaces species of other ants, and with its need for protein based food sources, it poses a threat to the majority of Norfolk's vertebrates and invertebrates. At the time of preparation of this Plan of Management, Argentine Ants have not been recorded in Bumbora Reserve, although there is an infestation within metres of the boundary of the Reserve, and there are a number of large areas of Norfolk that have been invaded by the species. An island wide Argentine Ant eradication strategy is currently being implemented and Argentine Ant infestations are progressively being treated.

3.4 Cultural Heritage and Scenic Amenity

Norfolk Island people use the Reserve to gather traditional weaving and plaiting materials. This includes the stem/leaf of drain flax (*Typha orientalis*), and the bark of specially planted non-native banana plants ('plun' in the Norfolk language) which is known in Norfolk as 'rauhulu'.

Harvesting native plants in the Reserve for traditional craft is a low-level, infrequent use which has not resulted in any adverse impact on the Reserve. A permit to collect the foliage of such plants is not required in Bumbora Reserve, provided the collection is carried out by hand and is not for commercial purposes. More specific information is provided in Appendix 1.

3.5 Recreation

Bumbora beach is popular for swimming, surfing, beachcombing, hihi collecting ('gwen rumma'), snorkeling, and nature appreciation. Other parts of the Reserve are also used for walking, picnicking and bird watching.

In the past, a small, moderately flat area close to Rocky Point Creek, just north of the car parking/barbecue area has occasionally been used for camping. The area is only large enough to accommodate one or two tents and is close to tall Norfolk Island Pines on the adjacent properties. At least one such pine has fallen into the camping area in the past, causing considerable damage. The majority of camping at Bumbora has taken place on the private land adjacent to the Reserve, with some daytime activities conducted inside the Reserve.

There are BBQs located to the west of the informal car parking area. The public toilet, which is located immediately to the north of the road loop/car parking area, is in good condition and is adequate for current and foreseeable future use. A rubbish bin is provided in the Reserve near the toilet block.



Figure 5: Woody McCoy's Walkway provides good access between Bumbora Beach and the carpark.

3.6 Access

The access road into the Reserve is unsealed and is impassable to vehicles when it is wet (even after light rain). The road surface is formed from *in situ* soils and weathered basalt. Over the years, fill and aggregate has been used to improve the road surface. However, during heavy rainfall events, soil, fill and aggregate gets carried down the path of the road and deposited in the grassed area at the base of the hill. At times, the road has been very badly scoured and rutted.

The road surface is graded periodically to remove ruts and trenches. Without this, the road would be difficult to negotiate in a 2WD vehicle or on a motorbike. Repeated grading and erosion has lowered the road surface to over 2m below natural ground level (which was the road level about fifty years ago). This increases the water flow down the path of the road itself, as it is difficult to drain the water off the road.

Not only does the unsealed road lead to access difficulties, but it causes deposition of sediment into Rocky Point Creek and into the ocean/Marine Park, which has a significant impact on the environment. Sealing of the road has been discussed for many years now, but has never eventuated. This is due to the difficulty in sourcing crushed rock and other materials to seal the road. The road is often considered a lower priority than other roads that have a higher level of use. Sealing of the road would improve access for the public and for emergency vehicles and would lead to a decrease in sediment reaching the waterway and the Ocean.

Unauthorised motor bikes are occasionally ridden on the walkway and the grass car park area is subject to significant damage from cars/4WD vehicles, especially after wet weather.

The raised timber walkway between the car park and the beach is named 'Woody McCoy's Walkway', in memory of Reginald Miles 'Woody' McCoy, who died on 30 September 2008. Woody was an enthusiastic staff member of the former Norfolk Island Parks and Forestry Service. The bridge over the creek was designed to be narrow enough to discourage unauthorised motorbike access. Parts of the timber walkway were constructed by the Norfolk Island Board Riders and the Youth Assembly with help from Commonwealth (Natural Heritage Trust) funding. The walkway is in need of maintenance, and this work should be done as soon as possible to ensure the safety of Reserve visitors.

4 Management Strategy

Management Vision: To improve the environmental values of Bumbora Reserve while preserving the recreational and cultural connections the Norfolk Island community has to the area.

4.1 Geology, Landform and Water

Strategic Objective: To manage soils, erosion and water using best practice

Surface water runs along the path of the access road down into Bumbora Reserve, causing sedimentation of Rocky Point Creek and runoff into the Marine Park. Sealing of the road and improved drainage would significantly improve these issues. At present it is understood that there are higher priority roads to be sealed and repaired on Norfolk Island. The environmental problems caused by the unsealed road, however need to be acknowledged when scheduling works. External environmental funding through organisations like Marine Parks Australia might be available for this work.

If funding or materials are not available for sealing the access road, drainage diversion humps or other erosion control structures should be considered at intervals along the length of the road. Consideration of changed growing conditions should be considered if this is undertaken, as there could be a considerable number of Norfolk Island Euphorbia (*Euphorbia norfolkiana*) persisting in the adjacent private property towards the top of the access road.

In the interim, strategic replanting of native species will assist in reducing erosion on the slopes between the access road and Rocky Point creek. In particular, if part of the grassed parking area were replanted with native species this would reduce the amount of sediment reaching the creek. This could include species such as Native Flax (*Phormium tenax*), M'uu (*Cyperus lucidus*), and Melky Tree (*Excoecaria agallocha*).

4.1.1 Management Actions: Landscape, soils and water

- a) Investigate access to the required materials and sources of funding to seal the access road into Bumbora Reserve to improve access to the Reserve and to reduce erosion and sedimentation into Rocky Point Creek and the Marine Park (High priority).
- b) If funding or materials are not available for sealing the access road, drainage diversion humps or other appropriate erosion control structures will be placed at intervals along the length of the road, taking into account the potential impact on Norfolk Island Euphorbia (*Euphorbia norfolkiana*) (High Priority).
- c) Propagate and replant native species in areas subject to erosion and sedimentation, especially those areas where a reduction in sedimentation into Rocky Point Creek can be achieved (High Priority).

4.2 Ecological Restoration

Strategic Objective: To improve the ecological condition of the Reserve, by restoring the vegetation and increasing the habitat available for native fauna.

Bumbora Reserve includes areas affected by woody weeds, but some areas of the Reserve are reasonably weed free. This coastal vegetation has a high ecological value. The best quality vegetation is in the southeast of the Reserve, on the slopes close to the beach. The mature pines and oaks in this area form a reasonable canopy, with a healthy shrub layer and a number of native coastal understorey species. There some weeds present, mostly limited to a reasonable number of windswept woody weeds. These can be hand removed with loppers/chainsaw and then painting the cut stump with

poison. This area is also the habitat of the critically endangered Norfolk Island Euphorbia (*Euphorbia norfolkiana*), which significantly elevates the priority of restoring the area.

The population of Norfolk Island Euphorbia needs to be monitored, and further supplementary planting undertaken as necessary. In 2017, 'Wild Mob' planted a new population of this Critically Endangered species, where the natural population had all but died out. It is important for new populations of this species to be established across the island, as populations have been observed to die out reasonably quickly. Unless the number of populations on the island is increased, the species remains at risk of extinction. Plants propagate easily from seed. At the time of preparation of this Plan of Management, there was no local nursery supplying this species. Council will need to source propagation services for this, and the many other species needed for replanting work.



Figure 6. Norfolk Island Euphorbia (*Euphorbia norfolkiana*) is a Critically Endangered endemic plant found in Bumbora Reserve. This specimen was planted by 'Wild Mob' (Photo courtesy Kevin Mills)

The second most important area for restoration work is along Rocky Point Creek, which delineates the western boundary of the Reserve. The weeds in this area are competing with native waterway vegetation, so need to be treated to reduce competition and allow the native species to regenerate. Again, this can be done largely by hand, stem injecting woody weeds or by cutting and painting the stumps with waterway appropriate poison. One of the important native species present in this area is the Melky Tree (*Excoecaria agallocha*), which is uncommon on Norfolk, so this population warrants assistance. This species strikes easily from cuttings, and propagation and replanting both along the creek and exposed slopes near the beach is recommended.

The heavy restoration work required in the northwest of the Reserve is a large project, and one which would need to be staged over a number of years of stem injecting/removing woody weeds, and

replanting natives. In the interim, the area needs to be watched for potential 'sleeper weeds'. These are the species that can grow slowly for months or sometimes years at a time without multiplying in number. However, when triggered by rain or perhaps other favourable weather events, these sleeper weeds can 'wake up', multiplying and becoming a big problem. During surveys in 2017, a small number of Pohutakawa (*Metrosideros kermadecensis*) were found growing just north of Bumbora Beach, within the best quality vegetation in the Reserve. These plants were at least a couple of years old, and numbered less than 10. All were removed to prevent a population establishing. Other sleeper weed species were identified and treated during the same surveys, and this important work can at least hold weed populations at a reasonably stable level when funding and resources are lacking.

Improved habitat diversity in the Reserve is important to the conservation of threatened native forest birds. For example, whilst the White-chested White-eye has not been seen for many years on Norfolk (and is now feared extinct), it was last reported to have been seen in the Bumbora area. In addition, Norfolk's fauna has been displaced by clearing and development over the years. Forest remnants such as Bumbora Reserve are very important for maintaining the remaining species of fauna.

The root rot fungus *Phellinus noxius* does occur on Norfolk, and it can occur as a natural part of the forest ecosystem. It is less likely to cause undue damage in a diverse and healthy native forest. The incidence and effect of *P. noxius* in the Reserve will be monitored and minimised by enhancing forest diversity and minimising disturbance and damage to tree butts and roots.

4.2.1 Management Actions: Ecological Restoration

- a) Seek external or other funding to undertake weed control and habitat restoration programs in key areas within the Reserve (High Priority).
- b) Develop and implement a strategy for the eradication or control of the more "uncommon" weed species and revegetation with appropriate native species within the Reserve, leaving woody weeds in place to decompose where possible to minimise disturbance (High Priority).
- c) Carry out woody weed control. The good quality vegetation in the southeast of the Reserve will be treated first, then the vegetation along Rocky Point Creek before tackling the heavy infestation of weeds in the northwest of the Reserve (High Priority).
- d) Investigate options for the supply of appropriate native plants and seed for revegetation within Norfolk Island Reserves (High Priority).
- e) Carry out ongoing coordinated Rat control to reduce damage to the seeds and seedlings of native plants and to nesting seabird populations within the Reserve (Ongoing/High).
- f) Encourage and support community participation in Reserve management, and encourage and support relevant scientific research (including research regarding Polynesian use of the Reserve) and monitoring projects within the Reserve (Ongoing/High Priority).
- g) Investigate the value of installing nest boxes for hollow dependent native species within the Reserve with advice from Norfolk Island National Park and Botanic Gardens (High Priority).
- h) Monitor the population of Critically Endangered Norfolk Island Euphorbia (*Euphorbia norfolkiana*) and other threatened plants within the Reserve, and propagate these species for replanting (High Priority).
- i) Propagate and replant Melky Trees (*Excoecaria agallocha*) along Rocky Point creek and near the coast (Medium Priority).
- j) Monitor the Reserve for occurrences of the root rot fungus *Phellinus noxius* and investigate methods treat where necessary (Ongoing/Low Priority).
- k) Manage the threatened plant and animal species listed under the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)* in accordance with the Norfolk Island Region Threatened Species Recovery Plan (High Priority).

- l) Maintain the current non-grazing policy within the Reserve, and ensure that fences, gates and cattle grids are maintained so they are stock proof to protect native plant species (including a number threatened endemic species) and fauna habitat, and to reduce the potential for erosion (High Priority).

4.3 Pest Animal Management

Strategic Objective: To reduce the negative impact of pest animals in the Reserve

Feral cat control is a priority in forested, coastal Reserves like Bumbora, due to the number of seabirds that nest in these areas. Control programs need to aim to reduce cat numbers prior to, and during the Ghostbird, White Tern, and Noddy breeding season.

Whilst feral cats are a priority, rat control also needs to be addressed. Any success in reducing cat numbers needs to ensure that rat numbers are monitored and subject to control efforts, due to the subsequent reduction in predation from cats. Rat control should be targeted in those areas with vulnerable flora and fauna, particularly when the Norfolk Island Euphorbia (*Euphorbia norfolkiana*) is fruiting and during bird breeding season. Rat control should also reduce the predation pressure on other birds that are now uncommon in the Reserve, but which may breed in the Reserve if conditions are favourable.

A feral chicken control program will be implemented to reduce the feral chicken population and protect invertebrates such as endemic land snails, dung beetles, and seeds of native plants.

At the time of preparation of this Plan of Management, Argentine Ants had not been recorded in Bumbora Reserve. There is a known infestation within metres of the boundary of the Reserve, and there are a number of large areas of Norfolk that have been invaded by the species. An island wide Argentine Ant eradication strategy is currently being implemented and Argentine Ant infestations are progressively being treated. Care should be taken to ensure Argentine Ants do not establish within the Reserve and Argentine Ant education programs should continue.

4.3.1 Management Actions: Pest Animal Management

- a) Carry out ongoing cat trapping and humane euthanasia, focusing on reducing cat numbers prior to and during the annual seabird breeding season (High Priority).
- b) Establish an ongoing coordinated (Public and private land) rat control program, with a target of reducing rat numbers in areas with vulnerable flora and fauna (High Priority).
- c) Carry out feral chicken and Red Parrot control within the Reserve and encourage neighboring landholders to control feral chickens and Red Parrots on their properties (High Priority).
- d) Continue with the implementation of the Argentine Ant Eradication Strategy throughout the Island (and within the Reserve as required) as part of the wider eradication program across the island, and continue educating the community about how to limit the spread of Argentine Ants (Ongoing/High).

4.4 Cultural Heritage and Scenic Amenity

Strategic objective: Preserve the cultural heritage and scenic amenity of the Reserve

Bumbora Reserve, and in particular the beach area has cultural heritage significance to the Norfolk Island community. Access to the ocean is valued for picking hihis, fishing, surfing, and swimming. The creek area is highly valued as a reliable source of Drain flax (*Typha orientalis*), mainly used for making traditional Norfolk hats, but also for bags, mats and bookmarks. Other weaving materials are available

in smaller quantities in the Reserve, and all of them will remain available without the need to apply for a permit to collect them for non-commercial activities.

The scenic amenity of the Reserve is of importance to the local community, and a drawcard for visitors to the island. Maintaining the views to Nepean and Phillip Islands will be an important component in planting designs and vegetation management.

There is some anecdotal evidence of Polynesian use of the Reserve. This should be investigated in more detail and interpretive material/signage should be prepared for the Reserve if it is relevant to the historic use of the Reserve.

4.4.1 Management Actions: Cultural Heritage and Scenic Amenity

- a) Promote and maintain a diversity of traditionally used plant species in the Reserve, available for collection without a permit (where collection is done by hand and is not commercial in nature) (Ongoing/High Priority).
- b) Ensure that restoration planting preserves views to Nepean and Philip Island from the Reserve (Ongoing/High Priority).
- c) Investigate possible evidence of early Polynesian use of the Reserve in more detail and prepare interpretive material/signage for the Reserve if it is relevant to the historic use of the Reserve (Medium Priority).

4.5 Recreation Management

Strategic Objective: Promote sustainable recreation in the Reserve

The beach area is the main focus of recreation activities, and most people use the walkway to access the beach. This access path and timber walkway to the beach will be maintained.

The picnic area is a small, low key location, and this will be maintained for the benefit of the community. The number and location of picnic facilities will be reviewed periodically by the Conservator of Public Reserves. Noncommercial use of the picnic area is encouraged. The small size of the picnic area precludes its use by commercial tour operators to provide picnic breakfasts, lunches and fish fries to larger groups of visitors. Commercial activities require a permit under the *Public Reserves Act*, as per Appendix 1. The unsealed access road limits commercial use of the Reserve, with the exception of 4WD tours which are regulated as a controlled activity (see Appendix 1).

In the past, camping has taken place in and adjacent to Bumbora Reserve. It is noted that landholders adjacent to the Reserve have sometimes made land available for camping. *The Public Reserves Act* only allows for camping in areas approved for that specific purpose, and at present there are no such areas within Bumbora Reserve.

4.5.1 Management Actions: Recreation Management

- a) Continue to promote and allow the current low level recreational activities within the Reserve (High Priority).
- b) Maintain safe public access through the Reserve to Bumbora Beach (Ongoing/High Priority).
- c) Maintain appropriate picnic facilities (Ongoing/High Priority).

4.6 Access and Facilities Management

Strategic Objective: To facilitate the quiet enjoyment of Bumbora Reserve by providing appropriate public access and facilities

The 'Woody McCoy's Walkway', the older timber walkway and the bridge are in need of urgent and regular maintenance, and this work should be done as soon as possible and then periodically to ensure the safety of Reserve visitors.

A number of informal vehicular access tracks have developed in the Reserve, partly as a result of 4WD tour operations. These tracks will be monitored, and the number of commercial operator vehicle movements will be limited to a level appropriate for these tracks. The conservator may limit vehicular access during wet weather to ensure the Reserve is not damaged.

There is no formal vehicle parking area provided in the Reserve and vehicles park on the grass around and within the turning loop at the bottom of the access road. Increased use of the Reserve in the future may cause unsustainable impacts to grassed areas, in which case formalisation and sealing of the area is recommended. Some damage is caused by normal vehicle use, but significant damage is caused by drivers 'hooning' on motor bikes and in cars. Should this problem become unmanageable, timber bollards will be erected to delineate the parking areas.

Rubbish bins are maintained in the Reserve as needed, and this is at the discretion of the Conservator.

4.6.1 Management Actions: Access and Facilities Management

- a) Monitor informal vehicular tracks, and limit vehicular movements in wet and other weather should the tracks be deteriorating (Ongoing/High Priority).
- b) Monitor the condition of the grass car park, and if deliberate damage or increased usage causes unsustainable impacts, use bollards to delineate formal parking areas (Ongoing/High Priority).
- c) Undertake regular maintenance to the Woody McCoy Walkway, the older timber walkway and the bridge to ensure they are safe for visitors to the Reserve (High Priority).
- d) Maintain the current visitor facilities within the Reserve, including public toilets and picnic tables (Ongoing/High Priority).
- e) Periodically review the number and location of picnic and barbecue facilities (Medium Priority).
- f) Replace the current wood-fired barbecues within the picnic area with a gas barbecue and appropriate shelter and ensure this is well maintained (High Priority).
- g) Upgrade or replace signage that is in disrepair (High Priority).
- h) Review the provision of bins periodically (Medium Priority).

4.7 Education and Interpretation

Strategic Objective: To foster the community's knowledge of the natural history and cultural importance of Bumbora Reserve

The Reserve provides opportunities for nature observation, including breeding White Terns, specially adapted coastal plants, a freshwater creek flowing into the marine environment, threatened species conservation, geological processes such as erosion and weathering in action, and direct access to corals, rock pools and the ocean.

There are also important cultural heritage connections to the Reserve, including the importance of Rocky Point Creek as a source of fibres for traditional plaiting and weaving. These are the kinds of information that can be used in interpretive signage, oral presentations, brochures and educational materials where appropriate.

Signs will be designed and erected in appropriate locations to provide visitors with information about significant natural and cultural features of the Reserve. These may include safety warnings, location

and direction signs. School and community groups will be encouraged to use the Reserve for environmental education, and assistance will be provided to such groups wherever possible.

4.7.1 Management Actions: Education and Interpretation

- a) Foster the community's connection with the natural environment and its cultural heritage values by providing appropriate interpretation and signage (Ongoing/High Priority).

4.8 Planning for Efficient Reserve Management

Strategic Objective: To deliver the best possible outcomes by efficiently allocating management resources across the Norfolk Island Public Reserves

The Norfolk Island Public Reserves network currently consists of 12 reserves¹⁰, each of which has a Plan of Management. Within each Plan there are a many actions, and Council needs a method to determine which actions are funded first. These management actions have been prioritised as high, medium or low (or ongoing), which will help in determining which actions to fund first. However, there are many reserves and Council must determine which actions from which reserves are to be funded in each successive annual budget. To do this, the high, medium and low priority actions for one reserve need to then be compared against the high, medium and low value actions for all other reserves.

To enable management actions to be compared against one another across the entire reserve network, the reserves themselves need to be prioritised. All of the reserves are intrinsically valuable, for many different reasons including conservation, recreation and heritage values. Spatial prioritisation of land for conservation and land management is a well-established science that allows land managers to direct funding to where it is most needed (Moilanen *et. al.* 2009). It is recognised that this is a complex process, and one which is generally performed by computer modelling software. Therefore, a full prioritisation project is recommended. In the interim, a draft prioritisation of the reserves has been prepared during the management planning process, and is presented in Appendix 2.

It is recommended that all actions from all management plans be pooled, and sorted into high, medium, low or ongoing status. This list of actions then needs to be further filtered using the priority assigned to each reserve. High priority actions in high priority reserves would generally be considered for funding before low priority actions in lower priority reserves. The highest priority actions would then be considered for funding in the annual Council operational plan. Obviously, this is only a starting point as Council's annual budget will need to consider a broad range of other factors and other projects competing for funding.

4.8.1 Management Actions: Planning for Efficient Reserve Management

- (a) Determine the priority of each reserve in the Public Reserves network for budget and resource allocation purposes. Amongst other things, this prioritisation should consider the objects of the *Public Reserves Act 1997 (NI)*, the zoning and gazetted purpose of the reserve and on ground observations. Priorities will change over time, so this is a dynamic process. In the interim, draft priorities have been assigned to each reserve in Appendix 2 of this Plan of Management (High Priority).
- (b) Combine the management action priority (e.g. high, medium or low) with the reserve priority to determine which actions across the entire reserve network are funded in each successive Council annual Operational Plan (High Priority).

¹⁰ Potentially subject to change, as per Appendix 3

- (c) Track the progress of each of the actions in the annual Operational Plan as a measure of the success of the Plan of Management (Medium Priority).

SUMMARY TABLE OF MANAGEMENT ACTIONS FOR BUMBORA RESERVE 2020 - 2030

Management Vision: To improve the environmental values of Bumbora Reserve while preserving the recreational and cultural connections the Norfolk Island community has to the area.

Theme	Strategic Objectives	Actions (How will we get there?)	Priority
4.1 Geology, Landform and Water	To manage soils, erosion and water using best practice	4.1.1 (a) Investigate access to the required materials and sources of funding to seal the access road into Bumbora Reserve to improve access to the Reserve and to reduce erosion and sedimentation into Rocky Point Creek and the Marine Park	High
		4.1.1 (b) If funding or materials are not available for sealing the access road, drainage diversion humps or other appropriate erosion control structures will be placed at intervals along the length of the road, taking into account the potential impact on Norfolk Island Euphorbia (<i>Euphorbia norfolkiana</i>) (High Priority).	High
		4.1.1 (c) Propagate and replant native species in areas subject to erosion and sedimentation, especially those areas where a reduction in sedimentation into Rocky Point Creek can be achieved.	
4.2 Ecological Restoration	To improve the ecological condition of the Reserve, by restoring the vegetation and increasing the habitat available for native fauna	4.2.1 (a) Seek external or other funding to undertake weed control and habitat restoration programs in key areas within the Reserve	High
		4.2.1 (b) Develop and implement a strategy for the eradication or control of the more “uncommon” weed species and revegetation with appropriate native species within the Reserve, leaving woody weeds in place to decompose where possible to minimise disturbance	High
		4.2.1 (c) Carry out woody weed control. The good quality vegetation in the southeast of the Reserve will be treated first, then the vegetation along Rocky Point Creek before tackling the heavy infestation of weeds in the northwest of the Reserve	High
		4.2.1 (d) Investigate options for the supply of appropriate native plants and seed for revegetation within Norfolk Island Reserves	High
		4.2.1 (e) Carry out ongoing coordinated Rat control to reduce damage to the seeds and seedlings of native plants and to nesting seabird populations within the Reserve	Ongoing/High
		4.2.1 (f) Encourage and support community participation in Reserve management, and encourage and support relevant scientific research (including research regarding Polynesian use of the Reserve) and monitoring projects within the Reserve	Ongoing/High

Theme	Strategic Objectives	Actions (How will we get there?)	Priority
		4.2.1 (g) Investigate the value of installing nest boxes for hollow dependent native species within the Reserve with advice from Norfolk Island National Park and Botanic Gardens	High
		4.2.1 (h) Monitor the population of Critically Endangered Norfolk Island Euphorbia (<i>Euphorbia norfolkiana</i>) and other threatened plants within the Reserve, and propagate these species for replanting	High
		4.2.1 (i) Propagate and replant Melky Trees (<i>Excoecaria agallocha</i>) along Rocky Point creek and near the coast	Medium
		4.2.1 (j) Monitor the Reserve for occurrences of the root rot fungus <i>Phellinus noxious</i> and investigate methods treat where necessary	Ongoing/low
		4.2.1 (k) Manage the threatened plant and animal species listed under the <i>Environmental Protection and Biodiversity Conservation Act 1999 (Cth)</i> in accordance with the Norfolk Island Region Threatened Species Recovery Plan	High
		4.2.1 (l) Maintain the current non-grazing policy within the Reserve, and ensure that fences, gates and cattle grids are maintained so they are stock proof to protect native plant species (including a number threatened endemic species) and fauna habitat, and to reduce the potential for erosion	High
4.3 Pest Animal Management	To reduce the negative impact of pest animals in the Reserve.	4.3.1 (a) Carry out cat trapping and humane euthanasia, focusing on reducing cat numbers prior to the annual seabird breeding season.	High
		4.3.1 (b) Establish an ongoing coordinated (Public and private land) rat control program, with a target of reducing rat numbers in areas with vulnerable flora and fauna	High
		4.3.1 (c) Carry out feral chicken and Red Parrot control within the Reserve and encourage neighboring landholders to control feral chickens and Red Parrots on their properties	High
		4.3.1 (d) Continue with the implementation of the Argentine Ant Eradication Strategy throughout the Island (and within the Reserve as required) as part of the wider eradication program across the island, and continue educating the community about how to limit the spread of Argentine Ants	High
4.4 Cultural Heritage and Scenic Amenity	Preserve the cultural heritage and scenic amenity of the Reserve.	4.4.1 (a) Promote and maintain a diversity of traditionally used plant species in the reserve, available for collection without a permit (where collection is done by hand and is not commercial in nature).	Ongoing/High
		4.4.1 (b) Ensure that restoration planting preserves views to Nepean and Philip Island from the reserve.	Ongoing/High
		4.4.1 (c) Investigate possible evidence of early Polynesian use of the Reserve in more detail and prepare interpretive material/signage for the Reserve if it is relevant to the historic use of the Reserve	Medium

Theme	Strategic Objectives	Actions (How will we get there?)	Priority
4.5 Recreation Management	Promote sustainable recreation in the Reserve.	4.5.1 (a) Continue to promote and allow the current low level recreational activities within the Reserve	High
		4.5.1 (b) Maintain safe public access through the reserve to Bumbora Beach.	Ongoing/High
		4.5.1 (c) Maintain appropriate picnic facilities.	
4.6 Access and Facilities Management	To facilitate the quiet enjoyment of Bumbora Reserve by providing appropriate public access and facilities	4.6.1 (a) Monitor informal vehicular tracks, and limit vehicular movements in wet and other weather should the tracks be deteriorating	Ongoing/High
		4.6.1 (b) Monitor the condition of the grass car park, and if deliberate damage or increased usage causes unsustainable impacts, use bollards to delineate formal parking areas	Ongoing/High
		4.6.1 (c) Undertake regular maintenance to the Woody McCoy Walkway, the older timber walkway and the bridge to ensure they are safe for visitors to the Reserve	High
		4.6.1 (d) Maintain the current visitor facilities within the Reserve, including public toilets and picnic tables	Ongoing/High
		4.6.1 (e) Periodically review the number and location of picnic and barbecue facilities	Medium
		4.6.1 (f) Replace the current wood-fired barbeques within the picnic area with a gas barbeque and appropriate shelter and ensure this is well maintained	High
		4.6.1 (g) Upgrade or replace signage that is in disrepair	High
		4.6.1 (h) Review the provision of bins periodically	Medium
4.7 Education and Interpretation	To foster the community's knowledge of the natural history and cultural importance of Bumbora Reserve	4.7.1 (a) Foster the community's connection with the natural environment and its cultural heritage values by providing appropriate interpretation and signage.	Ongoing/High

Theme	Strategic Objectives	Actions (How will we get there?)	Priority
4.8 Planning for Efficient Reserve Management	To deliver the best possible outcomes by efficiently allocating management resources across the Norfolk Island Public Reserves	4.8.1. (a) Determine the priority of each reserve in the Public Reserves network for budget and resource allocation purposes. Amongst other things, this prioritisation should consider the objects of the Public Reserves Act 1997 (NI), the zoning and gazetted purpose of the reserve and on ground observations. Priorities will change over time, so this is a dynamic process. In the interim, draft priorities have been assigned to each reserve in Appendix 2 of this Plan of Management.	High
		4.8.1 (b) Combine the management action priority (e.g. high, medium or low) with the reserve priority to determine which actions across the entire reserve network are funded in each successive Council annual Operational Plan.	High
		4.8.1 (c) Track the progress of each of the actions in the annual Operational Plan as a measure of the success of the Plan of Management.	Medium

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Appendix 1: Controlled Activities

Some activities are only permitted in the public reserves by obtaining a permit as per Part V of the *Public Reserves Act 1997*. These activities are known as controlled activities, and the permit must be either:

- specified by a plan of management; or
- by notice published in the Gazette by the Conservator of Public Reserves; or
- by a permit granted to an individual by the Conservator of Public Reserves.

Should a proposed activity be inconsistent with a plan of management, a permit is required. All activities undertaken in a reserve must be consistent with the objects of the *Public Reserves Act 1997*, regardless of whether a permit is required or not. The objects of the *Public Reserves Act 1997* are ‘to protect and conserve public reserves so as to –

- (a) promote the conservation of the natural environment and landscape beauty of Norfolk Island;
- (b) promote the conservation of the heritage of Norfolk Island; and
- (c) preserve the way of life and the quality of life of the people of Norfolk Island’

Table 1. Controlled Activities specific to Bumbora Reserve

The following controlled activities are published in this Plan of Management, as they are specific to Bumbora Reserve. Should activities inconsistent with those outlined in Table 1 be undertaken in Bumbora Reserve; (i) they must be consistent with the objects of the *Public Reserves Act 1997*; and (ii) they must be undertaken as per the conditions of a permit from the Conservator of Public Reserves.

Activity Type	Details of Controlled Activity and Permit Requirements for Bumbora Reserve
Vehicle Access	<p>The access road, turning loop and vehicle parking area are only approved for motor vehicle use, provided such motor vehicles are private or commercial vehicles other than plant and equipment or a bus or other motor vehicle being used to carry passengers that has dimensions or capacity in excess of:</p> <ul style="list-style-type: none"> a. Length: 7 metres b. Width: 2.3 metres c. Height: 2.8 metres d. Tare Weight: 3,500 kg. <p>Where a vehicle is not consistent with the specifications above, approval is required under the <i>Public Reserves Act 1997</i>.</p>

Table 2. Controlled Activities in all Norfolk Island Public Reserves

Table 2 outlines controlled activities in all public reserves on Norfolk Island, outlining what activities do not require formal approval, and providing guidance where a permit is required. Those activities that might be relevant to Bumbora Reserve include: 8 (Dogs), 10 (Exotic Fruit), 11 (Traditional craft materials), 19 (Non-commercial sporting and other community events, 22 (Camping) and others, depending on the situation. Should activities inconsistent with those outlined in Table 2 be undertaken in Bumbora Reserve, (i) they must be consistent with the objects of the *Public Reserves Act 1997*; and (ii) they must be undertaken as per the conditions of a permit from the Conservator of Public Reserves.

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
1. Hazardous Activities	<p>No person shall undertake any activity within a Reserve that may reasonably be expected to expose them or any other person to injury or death. Any other activity that may reasonably be expected to pose some hazard or nuisance to any person or to nuisance to the Reserve or adjoining land or sea may not be undertaken in a Reserve without a permit.</p> <p>The Conservator of Public Reserves may only grant such a permit if he or she is satisfied that reasonable measures can and will be taken by the person proposing the activity to ensure that the hazard or nuisance is minimised and likely to be reduced to an acceptable level.</p>
2. Firearms, other Weapons, Traps and Snares	<p>No member of the public shall possess, carry or use within a Reserve any form of:</p> <ul style="list-style-type: none"> • firearm, hunting bow, spear, slingshot, or any other weapon; • any type of trap, net, or snare, other than would reasonably be used and is intended to be used in rock fishing without a permit. <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so.</p>
3. Explosive Devices	<p>No person shall possess, carry or use within a Reserve any form of explosive device, including pyrotechnic devices such as fireworks of any kind, without a permit.</p> <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so. A permit can only be granted if the proposed activity:</p> <ul style="list-style-type: none"> • is an integral and important part of a community celebration that has been agreed by the Norfolk Island Regional Council; • is to be conducted by a properly licensed person; and • meets the safety standards for that activity that would have to be met in an Australian State or Territory. <p>Any person proposing to possess, carry or use any explosive device within a Reserve when applying for a permit shall provide the Conservator of Public Reserves with written details and plans of the proposed activity, proof of licences, a copy of appropriate standards and any other relevant technical details. A permit to conduct these activities shall not be granted unless the applicant holds a valid public risk liability insurance policy for at least \$20 million and meets the requirements in relation to certificates of currency and indemnity forms set out in this table at 20. Commercial Activities.</p>
4. Artefacts	<p>A person shall not interfere with any artefact in a Reserve without a permit. An 'artefact' is any man-made object, thing or item and includes but is not restricted to any object, thing or item that in some way has been protected or that may be capable of being protected under any other legislation. 'Artefact' includes any man-made object, thing or item that can reasonably be construed to be or to have been the property of a person or persons unknown.</p>

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
	The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so.
5. Metal Detecting	<p>No person shall use a metal detecting device in any public Reserve without a permit.</p> <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so.</p>
6. Native and Other Animals	<p>No member of the public shall:</p> <ul style="list-style-type: none"> • have in their possession, interfere with, damage, injure or destroy an animal whether alive or dead in a Reserve; • feed any animal in a Reserve; or • take an animal into, leave an animal in or knowingly permit an animal to enter a Reserve without a permit. <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so, or essential to the interpretive and education aims of the plan of management.</p>
7. Protection of Individuals of All Species	<p>No member of the public shall:</p> <ul style="list-style-type: none"> • take an individual of any species in a Reserve; or • remove an individual of any species from a Reserve without a permit. <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so, or essential to the interpretive and education aims of the plan of management.</p> <p>Despite anything in this paragraph, plants or parts of plants may be picked or removed in accordance with Sections 10 (Exotic Fruit), 11 (Traditional Craft Materials), 12 (Pine Seed Collection), and 13 (Firewood) of this table.</p>
8. Dogs	<p>Except as otherwise provided here, or provided in the <i>Dogs Registration Act 1936</i> and the <i>Dogs Registration Regulations 1994</i>, a person shall not take a dog into a Reserve unless that dog is under the control of and is in the company of that person.</p> <p>A dog must be kept on a leash <u>at all times</u> within Hundred Acres, Bumbora and Point Ross Reserves, and within other areas of Reserves that are not grazed by cattle to avoid death or injury to seabirds and other birds.</p> <p>A dog that is accompanied by and is under the control of a person is permitted in:</p> <ul style="list-style-type: none"> • those areas in public Reserves to which cattle normally have access for grazing; • all of Point Hunter, Kingston Common and Kingston Recreation Reserves except for those parts of those Reserves between the seaward side of Bay Street and high water mark and between the seaward side of the road around Emily Bay and high water mark; and • those parts of Government House Domain Reserve generally to the south of the wall on the south and south east of Government House grounds and driveway to which the public normally have access;

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
	<p>A person shall not permit any dog over which they could reasonably be expected to exercise control to go onto a tee, green or bunker that is part of Government House Domain Reserve or Point Hunter Reserve that is maintained and used by the Norfolk Island Golf Club as part of the golf course.</p> <p>A person shall not permit any dog over which they could reasonably be expected to exercise control to enter the graveyard in Cemetery Reserve.</p> <p>A person shall not permit any dog over which they could reasonably be expected to exercise control to interfere with any native animal or the habitat of any native animal.</p> <p>A person who could reasonably be expected to be responsible for exercising control over a dog in a Reserve must carry means for removing and disposing of dog faeces. If a dog over which a person could reasonably be expected to exercise control defecates in a Reserve that person must remove the faeces from the Reserve. A person shall not feed a dog in a Reserve.</p>
9. Plants	<p>No member of the public shall:</p> <ul style="list-style-type: none"> • have in their possession, interfere with, damage, injure or destroy any plant whether alive or dead in a Reserve; or • take a plant into or leave a plant in a Reserve without a permit. <p>Despite anything in this paragraph, plants or parts of plants may be picked or removed in accordance with Sections 10 (Exotic Fruit), 11 (Traditional Craft Materials), 12 (Pine Seed Collection), and 13 (Firewood) of this table.</p>
10. Exotic Fruit	Hand picking of fruits from exotic plants, such as peach, guava and lemon, for personal consumption is permitted in all public Reserves.
11. Traditional Craft Materials	Picking and removing by hand of foliage of <i>Typha orientalis</i> (Flags, Drain Flax, Bulrush) within Headstone Reserve, Kingston Recreation Reserve, Kingston Common Reserve and Bumbora Reserve for making traditional handicrafts is permitted. Picking and removing by hand of foliage of <i>Cyperus lucidus</i> (Moo-oo) and <i>Phormium tenax</i> (Flax) within all public Reserves for making traditional handicrafts is permitted. 'Traditional handicrafts' does not include items made for sale. Persons must ensure that they do not cause damage to any other plants when picking and removing the foliage of <i>Typha orientalis</i> (Flags, Drain Flax, Bulrush), <i>Cyperus lucidus</i> (Moo-oo) and <i>Phormium tenax</i> (Flax).
12. Pine Seed Collection	<p>Pine seed collection is not permitted in the Reserves without a permit</p> <p>The Conservator of Public Reserves may grant a permit for the collection of pine seed or cones from:</p> <ul style="list-style-type: none"> • unfenced areas in public Reserves to which cattle normally have access; and • picnic areas in public Reserves; <p>only if it is in the interests of the conservation and management of a public Reserve to do so.</p>
13. Firewood Collection	<p>Firewood collection is not permitted in the Reserves without a permit.</p> <p>The Conservator of Public Reserves may permit the collection of firewood only if it is in the interests of the conservation and management of a public Reserve to do so.</p>

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
14. Monuments and Memorials	<p>A person shall not erect or place a monument, memorial or commemorative marker of any kind in a public Reserve without approval from the Conservator of Public Reserves.</p> <p>The Conservator of Public Reserves may grant approval for a person to erect or place a monument, memorial or commemorative marker only if the proposed monument, memorial or commemorative marker:</p> <ul style="list-style-type: none"> • is of a style and structure appropriate to the local setting in the Reserve; • is a reminder of a person who, or a group or organisation which, made a major contribution to conserving the area or its biodiversity; • reflects cultural associations with the area by individuals or groups; and • marks a significant event in the history of the Reserve. <p>A proposal to erect or place a monument, memorial or commemorative marker in memory of a deceased person may only be approved if the deceased had a strong, long-standing involvement with conserving the area or its biodiversity. In considering a proposal to erect or place a monument, memorial or commemorative marker, the Conservator of Public Reserves shall also have regard to:</p> <ul style="list-style-type: none"> • potential impacts on the amenity of the Reserve including but not limited to visual obtrusiveness taking into account materials, size, design and content; and • satisfactory maintenance arrangements or commitments, including costs, by the proponent. <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so.</p>
15. Research	<p>A person shall not undertake any research for an archaeological, scientific or any other purpose or take, measure or in any other way mark or tag any samples of air, water, soil, rock or take, measure or in any other way mark or tag any biological item, organism or material within a Reserve without a permit.</p> <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so, or essential to the interpretive and education aims of the plan of management. Unless a formal agreement has been reached that ensures that the Norfolk Island community will share appropriately in any profits or other benefits from the proposed access to biological resources, permits granted for scientific research purposes will not convey to the permit holder or any other person, institution or corporation any rights whatsoever to any benefits that may flow from intellectual property obtained by the permit holder as a result of the permit holder's activities. In such cases, every permit granted for scientific research purposes shall include the following condition:</p> <p><i>This permit is issued for scientific research and educational purposes only and does not convey to the permit holder or any other person, institution or corporation any rights whatsoever to any benefits that may flow from intellectual property obtained by the permit holder as a result of the permit holder's activities pursuant to this permit, such intellectual property and benefits remaining vested in the Norfolk Island Regional Council and or the Commonwealth of Australia as the case may be.</i></p>
16. Horse-riding	Horses may be ridden without a permit in those areas in public Reserves to which cattle normally have access for grazing.

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
	A permit may be granted for occasional horse riding within other Reserves if the Conservator of Public Reserves is satisfied that such activity will not adversely affect the amenity of the Reserve for other users and will not damage the natural and cultural features of the Reserve.
17. Motor Vehicles	<p>A person shall not use or leave a motor vehicle in a Reserve except in or on an area approved for the purpose. Motorised wheelchairs or mobility aids may be used to convey disabled persons in public Reserves. Motor vehicles required for emergency services response purposes, or for conservation and management will be permitted in a Reserve. Conservator of Public Reserves must be informed by the responding emergency service coordinator as soon as practicable of any entry of an emergency service response vehicle to a Reserve.</p> <p>The Conservator of Public Reserves may permit commercial plant and equipment in the Reserve only if it is in the interests of the conservation and management of the Reserve.</p>
18. Lighting Fires	<p>As per the <i>Public Reserves Act 1997</i>, a person shall not light, use or maintain a fire in a Reserve except in –</p> <ul style="list-style-type: none"> (a) a fireplace approved for the purpose; or (b) a portable barbeque, or portable stove in which heat is provided by the burning of liquefied petroleum gas <p>The Conservator of Public Reserves may approve the lighting of a fire or fires in a Reserve if it is in the interests of the conservation and management of the Reserve to do so.</p>
19. Non-commercial Sporting and Other Community Events	<p>Unless otherwise specifically approved in a plan of management, non-commercial sporting and other community events shall not occur in a Reserve without a permit.</p> <p>A permit shall not be granted for any non-commercial sporting or other community events unless the Conservator of Public Reserves is satisfied that such event will not adversely affect the amenity of the Reserve for other users and will not damage the Reserve.</p>
20. Commercial Activities	<p>As per the <i>Public Reserves Act 1997</i>, a person shall not undertake a commercial activity in a Reserve except in accordance with an approval for the activity. A permit to conduct a commercial activity in a Reserve shall not be granted unless the applicant provides a certificate of currency showing that he or she holds a valid public risk liability insurance policy for at least \$20 million. The certificate shall have endorsed upon it the Norfolk Island Regional Council's interest in granting the permit and shall specifically refer to the activities intended to be conducted pursuant to the permit. It will be presumed that in issuing the certificate of currency the insurer has been advised of the activities to be conducted and that those activities are not the subject of any exclusion under the policy held. The permit to conduct these activities will cease to be valid immediately if the permit holder's public risk liability insurance lapses for any reason during the period for which the permit has been issued or if a certificate of currency appears to be defective in any manner.</p> <p>A permit shall not be granted for any commercial activity unless the Conservator of Public Reserves is satisfied that such activity will not adversely affect the amenity of the Reserve for other users and will not damage the Reserve. Filming and photography of any kind other than for private purposes and the use of any part of a public Reserve for promotions of any kind are considered to be commercial activities. Wedding ceremonies are detailed in part 21 of this table. A permit shall not be granted for commercial activities, other than bus tours, off-road vehicle tours, walking tours, horse rides or picnics in a</p>

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
	<p>Reserve unless the Conservator of Public Reserves is satisfied that such activities are in the interests of the conservation and management of the Reserve, or are essential to the interpretive and education aims outlined in a plan of management. Commercial tour operators shall in all cases:</p> <ul style="list-style-type: none"> • provide sufficient cooking equipment, tables and seating to cater for all of the persons on their tour; and • remove all rubbish and other wastes, including used cooking oil, generated by their activities.
21. Weddings	<p>Weddings are not permitted in Cemetery Reserve, Government House Domain Reserve and War Memorial Reserve without a permit.</p> <p>A wedding ceremony may be conducted, including by a wedding celebrant in the course of a business, trade, profession or calling, without a permit in a public Reserve other than Cemetery Reserve, Government House Domain Reserve and War Memorial Reserve, provided</p> <ul style="list-style-type: none"> • confetti or rice is not thrown; • hire equipment of any description is not used; • wedding parties use their own catering supplies: no commercial catering; • catering supplies are limited finger food and to non-alcoholic drinks; • no gazebos, marquees or other structures are erected; • there are no 'lanterns' and/or candles (or similar paraphernalia) with naked flames and no lighting of fires outside of a designated fireplace, or during a fire danger period declared under s21 of the Fire Control Act 2000; • no balloons or other non-biodegradable materials or paraphernalia are released into or left in the environment; • generators, electrical lighting and public broadcast equipment is not used; • the site and any facilities used are left clean and rubbish is removed prior to leaving the site; • the event does not conflict with the use or enjoyment of the Reserve by others; and • if the ceremony is conducted by a wedding celebrant in the course of a business, trade, profession or calling, that celebrant holds a valid public risk liability insurance policy in accordance with section 20 of this table
22. Camping	<p>As per the <i>Public Reserves Act 1997</i>, a person shall not camp overnight in a Reserve except in an area approved for the purpose. Camping will not be permitted in any Reserve except Government House Domain Reserve other than on or in the immediate vicinity of the Polynesian settlement site and Point Hunter Reserve in the pines between Emily Bay and the golf course.</p> <p>Camping shall be permitted in Government House Domain Reserve and Point Hunter Reserve at times between 1 December and 1 March as specified in the Gazette. Camping in Government House Domain Reserve and Point Hunter Reserve at other times may be permitted only if the Conservator of Public Reserves is satisfied that it is in the interests of the conservation and management of the Reserve, or essential to the interpretive and education aims of the management plan to do so.</p>
23. Structures	<p>A person shall not erect, place or leave a structure in a Reserve except in accordance with an approval.</p> <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so.</p>

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
24. Chemicals	<p>No chemical pesticide, herbicide or toxic or noxious substance shall be used, left or deposited in a Reserve without a permit from the Conservator of Public Reserves.</p> <p>The Conservator of Public Reserves may only grant such a permit if it is in the interests of the conservation and management of the Reserve to do so.</p>
25. Quarrying and Mining	<p>The Conservator of Public Reserves <u>may</u> consider approving a permit for rock extraction/quarrying activities within Headstone Reserve providing:</p> <ul style="list-style-type: none"> • A thorough independent investigation is done to determine the suitability of Headstone Reserve as a rock extraction site in comparison to other potential sites on public and private land on Norfolk Island for rock extraction, and Headstone Reserve is identified as the best location for this activity. • All required permits and approvals (including permits from Marine Parks Australia and EPBC Act referrals where required) are obtained prior to any works commencing. • A detailed Environmental Impact Statement/Assessment is prepared by an independent party as part of the development. • The Environmental Impact Statement considers the impact of the rock extraction on the environment in Headstone Reserve (including flora, fauna) and details and costs appropriate mitigation measures and environmental offsets, including habitat restoration, revegetation, weed control, erosion control and improvements to drainage and runoff from Public Reserves into the Marine Park in Headstone Reserve and/or in other High Priority Public Reserves on Norfolk Island to ensure no net loss of environmental values on Norfolk Island. • The Conservator of Public Reserves is satisfied that the recommended environmental offsets and mitigation measures are appropriate to ensure there will be no long-term overall impact on the environment of Norfolk Island. • Funding for the recommended environmental offsets is provided following approval to proceed, and prior to the commencement of any activities associated with rock extraction. <p>Any other quarrying and or mining in any form, other than for sand from Cemetery Reserve in the short term, shall not be permitted in any other Reserve.</p> <p>Sand mining in Cemetery Reserve will be permitted by the Conservator of Public Reserves <u>only until an alternative source of sand is identified</u>, provided the sand is for an essential building or construction purpose, specifically;</p> <ul style="list-style-type: none"> • plastering; • block and brick laying; • installation of water storage tanks; and • tiling for bathrooms, toilets and kitchens; <p>Each removal of sand must be from within an area specified by the Conservator of Public Reserves, and in accordance with any conditions that the Conservator of Public Reserves may set from time to time; and an appropriate fee must be paid.</p>

Activity Type	Details of Controlled Activity and Permit Requirements for ALL Public reserves
	In granting each permit for the removal of sand, the Conservator of Public Reserves shall have regard to archaeological advice, the advice of the KAVHA Site Manager, the KAVHA Conservation Plan of management and, in the case of requests for significant amounts of sand, any recommendation of the Norfolk Island Regional Council. A permit for the removal of sand for other than an essential building or construction purpose shall only be granted if it is in the overriding public interest to do so. Sand may not be removed elsewhere from within Cemetery Reserve or from within any other Public Reserve.
26. Spoil Stockpiles	The dumping and or stockpiling of soil, spoil or fill shall not be permitted in a Reserve unless that stockpile is in accordance with a plan of management, or in the opinion of the Conservator of Public Reserves, is essential to undertaking or completing works in a public Reserve to: <ul style="list-style-type: none"> • ensure public safety; and or • conserve the environment.

Definitions for Controlled Activities

'Animal' means:

- (a) any invertebrate or vertebrate individual, organism or biological specimen alive or dead that is not a member of the plant kingdom or fungi kingdom, other than a domestic female bovine of the genus *Bos* to which a pasturage right¹¹ applies or its dependent calf up to 6 months old; or a registered¹² domestic dog of the genus *Canis*; or
- (b) any part of such an individual, organism or biological specimen; or
- (c) embryos, eggs or any other part of the reproductive cycle of such an individual, organism or biological specimen.

'Commercial activity' has the same meaning as 'commercial activity' in section 46 of the Public Reserves Act 1997, which states:

'commercial activity' means –

- (a) *supplying, or offering to supply, goods or services; or*
- (b) *producing goods;*

in the course of a business, trade, profession or calling.

'Interfere' has the same meaning as 'interfere' in section 42 of the *Public Reserves Act 1997*, which states 'interfere' includes remove, move, damage, deface, obscure and tamper.

'Nuisance' includes noise, or environmental harm to the Reserve or potentially to adjoining land or sea.

'Plant' means a member of a 'species' as defined here of the plant kingdom or the fungi kingdom.

'Species' means a group of biological entities that:

- (a) interbreed to produce fertile offspring; or
- (b) possess common characteristics derived from a common gene pool; and includes:

¹¹ In accordance with the *Pasturage and Enclosure Act 1949*.

¹² In accordance with the *Dogs Registration Act 1936*.

(c) a sub-species.

'Take' means take, catch, capture or keep and includes, in relation to a live individual of any species, kill or injure (whether or not for the purpose of taking)

Permit Application and Standard Indemnity

A person seeking to undertake a controlled activity in a public reserve is required to use the permit application forms available from the Norfolk Island Regional Council. In signing the application form, the applicant is undertaking to indemnify the Commonwealth and the Norfolk Island Regional Council in the terms of the indemnity on the form. Every permit granted for a controlled activity shall include the following condition:

'The permit holder, in accordance with the indemnity provided on the application for the permit, fully and irrevocably indemnifies and saves harmless the Conservator of Public Reserves, all rangers, the Norfolk Island Regional Council together with all employees servants and agents thereof, the Administrator of Norfolk Island, the Crown and the Commonwealth of Australia jointly and severally from any and all liability and claims whatsoever arising in any way out of or in connection with or as a result of any activities carried out or conducted or proposed to be carried out or conducted under the permit or the involvement of any person firm or corporation in any way in regard to any activity carried out or to be carried out under the permit;

and the footnote:

The Norfolk Island Regional Council expressly denies any liability for any injury occurring to any person who may conduct any activity pursuant to this permit.'

The holder of a permit who has contravened a condition to which that permit is subject but who seeks to renew that permit or have a new permit granted will be required by the Conservator of Public Reserves to show cause why such permit should be renewed or granted.

In so showing cause, the permit holder will have to:

- provide evidence that fully explains the circumstances surrounding the contravention of the permit condition; and
- demonstrate the measures that the permit holder will take to ensure that the conditions to which a future permit would be subject will be complied with.

The Conservator of Public Reserves may, by notice in the Gazette, revoke or amend in any manner the approval or other regulation of any activity approved or otherwise controlled in a Plan of Management.

Appendix 2: Preliminary Reserve Prioritisation for Resource Allocation

Table 4 presents the draft prioritisation of the reserves. In prioritising the reserves against one another, the draft prioritisation considered the criteria in Table 3. Note that this is a preliminary prioritisation only one of the high priority management actions from this plan is to formally prioritise the reserves using solid scientific methodology.

Table 3. Criteria for determining the priority of reserves for budget allocation

Criteria	Notes on Assessing the Reserves using Criteria
The objects of the <i>Public Reserves Act 1997 (NI)</i>	The objects of the Public Reserves Act 1997 (NI) are 'to protect and conserve public reserves so as to- a. promote the conservation of the natural environment and landscape beauty of Norfolk Island; b. promote the conservation of the heritage of Norfolk Island; and c. preserve the way of life and the quality of life of the people of Norfolk Island.' The reserves have been compared against the objects of the Act. Those reserves with greater environmental or heritage values have been assigned a higher priority than those with lower values.
On ground observations and survey results	Field values may include the presence of threatened species, amount of remnant vegetation cover, level of weed invasion, habitat for native fauna, presence of pest animals, etc. The reserve may also have heritage values such as evidence of Polynesian use, Pitcairn heritage use or European convict heritage.
Land zoning and overlay maps applicable under the NI Plan 2002; Reserve purpose when originally gazetted	Is the land in the open space, conservation or another zone? The more protected the land zoning, the higher the conservation potential of the land. Consideration should also be given to the Norfolk Island Strategic Plan Map (e.g. is the land in the High Rural/Conservation Value area?) and the Norfolk Island Heritage Overlay Map. The purpose of the reserve when it was first gazetted is also important. For example, was the reserve gazette for the conservation of flora and fauna, forestry, watering stock, common, or some other purpose?
Land use in adjoining allotments	Does the land adjoin areas with high conservation values, such as the National Park, or is it surrounded by small, heavily modified allotments? This will increase or reduce the conservation value of the land respectively.

Table 4. Draft prioritisation of Norfolk Island Public Reserves for allocation of management resources

Reserve Name	Priority (1 =Low to 10 = High priority)
Selwyn Reserve	9
Hundred Acres Reserve	9
Bumbora Reserve	8
Nepean Island Reserve	8
Two Chimneys Reserve	7.5
Anson Bay Reserve	6
Ball Bay Reserve	6
Cascade Reserve	5
Headstone Reserve	5
Point Ross Reserve	4
Middleridge Reserve	3
Stock Reserve	1

Appendix 3: Transitional Reserve Management Arrangements Following Changes to the *Norfolk Island Act 1979* in 2016

The first plans of management were prepared for most of the Reserves in 2003. At this time there were 18 reserves managed by the former Administration of Norfolk Island. Each reserve had a plan of management including the 6 reserves located in KAVHA (i.e. Cemetery Reserve, Government House Domain Reserve, Kingston Common Reserve, Kingston Recreation Reserve, Point Hunter Reserve and War Memorial Reserve). There was also a separate overarching KAVHA Conservation Management Plan, which took precedence over the Public Reserves Management Plans in the case of any inconsistencies.

Between 1978 and 2016, Norfolk Island had a form of internal self-government under the *Norfolk Island Act 1979 (Cth)*. The Norfolk Island Legislative Assembly was responsible for governing the island and managing the reserves. In 2015 – 2016 however, changes were made under the Act to remove internal self-government and it was determined that many services would be delivered by a newly elected Regional Council, including management of the Public Reserves. There were also changes to the ownership of a number of the public reserves as shown in Table 5.

Table 5. Changes to ownership and management of Norfolk Island Public Reserves

1. Reserves transferred from the Commonwealth to the Norfolk Island Regional Council ¹³	2. Interests yet to be transferred from the Commonwealth of Australia to the Norfolk Island Regional Council	3. Interests to be retained by the Commonwealth of Australia ¹⁴
<ul style="list-style-type: none"> • Anson Bay Reserve • Ball Bay Reserve • Bumbora Reserve • The portion of Cascade Reserve previously known as the Quarantine Reserve • Headstone Reserve • Hundred Acres Reserve • Middleridge Reserve • Point Ross Reserve • Stock Reserve • Two Chimneys Reserve 	<ul style="list-style-type: none"> • Nepean Island • Selwyn Reserve • The remainder of Cascade Reserve not previously known as the Quarantine Reserve (includes Philipsburg Cemetery) 	<ul style="list-style-type: none"> • All KAVHA reserves including: Cemetery Reserve • Government House Domain Reserve • Kingston Common Reserve • Kingston Recreation Reserve • Point Hunter Reserve • War Memorial Reserve

During 2019-2020, updated Public Reserve Management Plans were prepared for the 10 reserves in Column 1 (includes part of Cascade Reserve) plus the reserves in Column 2 (includes the remainder of Cascade Reserve). The KAVHA reserves in Column 3 will be managed under a new arrangement with the KAVHA Heritage Management Plan 2016 still guiding the overall heritage management of the area. Instead of having individual public reserve management plans for the KAVHA reserves, it is anticipated that a Memorandum of understanding or a similar document will be used to specify the management of the significant natural values of the reserves. Day to day operational work including mowing, issuing of camping permits and dog restriction enforcement will also need to be captured in this arrangement, as it is assumed that such works will be the responsibility of Council.

¹³ As per the *Norfolk Island Land Transfer Ordinance 2016 (Cth)*

¹⁴ As per advice from the Commonwealth Department of Infrastructure and Regional Development, 2016